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ABSTRACT

The Philadelphia City Schools engaged in a four-year program to develop and test dual audio television, a way to help children learn more from the massive amount of time they spend watching commercial television. The format consisted of an instructional radio broadcast that accompanied popular television shows and attempted to clarify and amplify the vocabulary and word concepts that were introduced. The power of the dual audio was that it piggy-backed on an already existing delivery system, but difficulties derived from attempting to inject educational content into formats that were in many ways inimical to good teaching practice. Research revealed that certain methods of presentation were more effective than others, but the overall results were disappointing. (EMH)

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SOME FINAL REFLECTIONS ON DUAL AUDIO TELEVISION

by
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Over the last four years, we have been engaged in testing and developing dual audio television, a way to help children learn from the massive amount of time they spend watching commercial entertainment television. Our most recent research has convinced us that although the general concept works, dual audio as we have been using it is not sufficiently effective to warrant development at this time. We have, however, learned a great deal about it in the course of our work, and this paper is an attempt to draw together our data and our experience into a discussion of issues and applications which might be useful to others considering this specific idea, or other educational ventures like it.

Background

Dual audio television consists of a radio program which children can hear along with popular TV shows such as The Flintstones or Gilligan's Island. The radio narrator does not talk when the TV characters are talking, but waits until the pauses in the dialog, and then uses the action of the show as examples for instruction in basic skills, such as vocabulary, social studies, or process learning. For the child, the experience is similar to that of watching a TV show with an older friend who explains things in the show that he does not understand.

Research on dual audio began with small laboratory studies designed to indicate whether the idea could work at all, and, if so, what forms of commentary were most effective. By testing short program segments on small groups of children, a workable dual audio format was developed. Broadcast tests with limited audiences were then used to determine if dual audio could attract a home audience, and if the children learned the vocabulary material emphasized in most broadcasts. At first fix-tuned FM radios were provided for the children, and then it was discovered that 85% of the children had FM radios in their homes, and a significant number would use them for listening, so the provision of radios was discontinued. Learning results on these early tests were positive. After an initial public broadcast of two weeks with Gilligan's Island, which drew a Metropolitan audience of 20,000 people, and a City of Philadelphia audience 25% larger than that of The Electric Company, a six month half hour daily broadcast schedule accompanying The Flintstones was begun. Research on the effectiveness of these broadcasts, conducted by The American Research Bureau (ARB) and Educational Testing Service (ETS) was disappointing. ARB reported an initial Metropolitan audience of 10,000, but toward the end of the broadcast period, this dropped to 1,500. ETS reported no significant learning gains attributable to the program, but problems in the research design severely limited the reliability of the results. To get around these problems and to test the potential of dual audio with Saturday morning networked TV shows, a test was conducted with the CBS Saturday morning program, Scooby Doo. ARB reported an audience of 7,000 children, and learning results were positive, though results tended to fade over time among children from Title I areas. As in previous tests, it appeared that those children who gained the most were those already most predisposed toward education, and those whose parents were most interested in helping them learn. For those kids who had difficulty learning, dual audio did not seem to provide the constant personal prodding, support, and interactive feedback which they needed; for them it was mostly fun, rather than instruction. (For detailed research results, see articles in the attached bibiliography.)

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During the last year of developmental research, an intensive effort was mounted under the auspices of The Agency for Instructional Television to see if organizations other than Philadelphia would be interested in cooperating to produce dual audio television. Though the idea generally received a very positive reception, funding was clearly going to be a problem unless dual audio could be produced at a national level, and networked nationally. The relatively disappointing results in the final tests with a networked TV program made the networking of dual audio unlikely.

Some Issues:

The power of the dual audio concept was that it provided a way to use existing radio technology and existing TV programs which children were already watching, to form a new inexpensive instructional resource. Inherently, this combination of non-educational organizations was also the greatest weakness in the idea. First, it required that a family have both a TV and a radio available and that kids perform the entirely new behavior of listening to both media at the same time. In addition it meant that we were always working with a TV show which had been prepared for entertainment and audience-holding power, not education, and that we were working with the show after it had already been produced, rather than in its formative stages. There was the constant frustration of working with someone else's material, and trying to make the best of it, rather than starting afresh. In itself this is not an overwhelming difficulty; those who work in urban public schools meet plenty of frustrations but endure them because they feel the job is important, and we would have felt well satisfied if dual audio had made an important difference to large numbers of kids. Nonetheless, the limitations imposed by working "in another's turf" are something that need to be carefully considered by any system which intends to use non-educational systems for educational purposes.

From the educator's perspective, the financial appeal of dual audio consisted in large part in the ability to "piggyback" or "hitchhike" on the already existing delivery system of commercial TV and public radio. It became increasingly clear, however, that there were definite limits on the willingness of these systems to carry hitchikers. TV stations, by and large, were very willing to cooperate since they could provide a public service without changing their broadcast schedule, and only had to contribute the 30 second announcements about the dual audio show immediately preceding it, but the contribution of this time became an issue if we were programming during the height of the Christmas commercial season. The public service radio stations which were generally paid a modest fee for their services, still saw themselves as the group with the most to lose from dual audio since they were contributing time out of their broadcast schedule. Over the period during which dual audio was being developed, public radio broadcasters began to guard their schedules more jealously, as they discovered that by imitating the commercial stations and maintaining a consistent "sound" (usually classical/jazz/public affairs) they could attract a steady audience which would also help support the station through listener contributions. As these attitudes spread among public broadcasters, it became increasingly difficult to get time to broadcast a program which was not self-contained radio, which had a very peculiar "sound" indeed, and which did not appeal to potential contributors. Again, in weighing the feasibility of an idea such as dual audio, the costs and benefits to the other agencies involved have to be considered in the terms they use, rather than simply in those of the educators. And educational experimentors need to realize that while many agencies are willing to try an educational experiment for a short while, they become much more cautious if the experiment becomes operational and long-term commitments are required.

The status of dual audio as an educational medium which combined several non educational systems and which operated at home rather than in school also posed difficult problems of long term relationship and financing. Assuming that dual audio were effective, how should its instruction be related to the schools, and who should be responsible for funding it? Our experience clearly indicated that when teachers encouraged children to tune in, they were much better listeners and learners, but we were never able to resolve in our own minds the question of how much we ought to encourage schools to control the free home time of children. When it came to funding, no agency--educational or broadcasting--saw the development of an educational system like dual audio as a clear priority because it did not fall entirely within their bureaucratic jurisdiction. In order for such ventures to succeed, there will either have to be more sharing between present bureaucratic offices, or a new office especially devoted to such multi-system instruction will have to be developed.

Within these broader concerns, there were issues which were specific to dual audio, but which may also be suggestive to others working in similar areas. One issue was the nature of the TV program we chose to work with. Initially we had assumed that we could work with almost any TV program that had a large audience. However, with some programs (Spiderman) we began to feel that the harm done children by the violence in the program far outweighed the good we might be able to do with dual audio. With others (The Flintstones) the rapid pacing of the show made it difficult to build the dual audio narrator's personality, and to teach enough to be effective without also be intrusive. (We believed these difficulties accounted for the drop in audience over the six-month period of daily broadcasting.) Other shows (Scooby Doo) had so little plot variation that it became difficult to find something to teach. The most successful show we worked with was Gilligan's Island. While not exactly a paragon of intellectual stimulation, it was not violent, had a relaxed pace and manner that made a "second sound" easily compatible, and enough complexity of plot and language to generate interesting incidents for the dual audio narrator to discuss.

We spent a great deal of attention on the dual audio narration. In the early stages of testing we tried out a number of "character" roles, but discovered that the children seemed to like the dual audio commentary best when it was delivered in a form which corresponded to what was actually happening--an adult watching kids' shows and helping them learn. At first we began by teaching any words that came up in the TV program which kids would not understand, but we rapidly learned that we could teach much more than children could learn, and that it was best to concentrate on about two words per show, and try to teach them thorough. Formative research suggested that we were most effective when we chose words which were used in the show, which had a concrete visual referent, which were easy to pronounce, and which were immediately relevant to the child's life. If we could find a way to define the word with not only a verbal definition, but with one which told how the word felt physically, this also seemed to help young children get an understanding of it. Each word was defined explicitly three times and then used in about another dozen implicit examples and illustrations which broadended the definition as much as possible.

The process of research which was so central to the Project's activities was often frustrating and disappointing, though in general we are glad that we decided to test the idea slowly, rather than run the risks of springing it full-blown upon kids. A major research difficulty was that there were no previous studies which could serve as exact models for helping us answer the questions we felt were important. What seemed like small adaptations in analogous studies often produced significant and unanticipated changes. Conducting naturalistic research, which made random assignment to treatment groups impossible, also posed enormous logistical problems, and yet was

essential for us to get a sense of how children responded in their own homes. Finally, when the data was collected, it was difficult to assess its practical significance, particularly since some of the important effects of dual audio--the effect on critical thinking, or on suggesting a parent role model--were among the most difficult to measure.

Other Applications:

Though it is our feeling that dual audio is not feasible as a broadcast medium at this time, there are a number of other ways in which the concept could be conceivably applied:

It has often been suggested to us that dual audio be used to supplement instructional films or TV programs, or that it be used to help younger children understand sophisticated materials. Though we have never tried this, we doubt that it would work, as instructional programs are heavily didactic, and an extra layer of instruction would probably be unbearable.

We have been intrigued by the possibility of providing dual audio with quality television programs, such as classical plays. Though this idea has appeal, our present feeling is that the silences in quality programs are often as important as the words, and the dual audio commentary inserted in them would be likely to be obtrusive.

Both dual audio and the original TV program could be carried on an unused commercial channel of a cable system. (A educational channel cannot be used because the TV program contains commercials.) The broadcast of both radio and TV on one channel would obviously reduce the difficulties inherent in coordinating two separate media; the only difficulty would be in training children to use a new channel to receive a specific program.

If the cassette or disc market develops, it would certainly be possible to provide programs with a variety of dual audio accompaniments, and, since the individual user would be able to choose whether to listen to it by merely flicking a switch, this seems like an ideal use of the dual audio concept.

Commentary such as that in dual audio could be worked into the scripts of entertainment shows as they are being produced. Indeed, a number of new children's programs have begun to do this. Many of these additions, however, do not have the qualities of successful commentary discussed above, and we doubt their educational effectiveness. Our experience indicates, however, that there is tremendous potential for instruction within the context of entertainment programs, and we hope that it will be explored more fully as the initial production of these shows.

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